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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,971	03/31/2004	Toshiaki Takahashi	249594US3	4879
22850	7590	07/13/2005		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				EXAMINER GHATT, DAVE A
				ART UNIT 2854
				PAPER NUMBER

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/812,971	TAKAHASHI ET AL. 	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dave A. Ghatt	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 31 March 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,15,16 and 29-33 is/are rejected.
- 7) Claim(s) 3-14 and 17-28 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08/05/04</u> .	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 15, 16, 30, 31, 32, and 33, are rejected under 35 U.S.C. 102(b) as being anticipated by Kang (US 6,254,085). Insofar as structure and method steps are recited, Kang teaches the claimed subject matter. With respect to claims 1, 15, 30, 31, 32, and 33, Kang teaches a sheet-feeding device configured to convey recording media to receive an image from a photoconductor. (See column 1 lines 11-14, and Figure 1.) As shown in Figure 2, Kang teaches a cassette (stacking means) 200 in which recording media are configured to be stacked, the cassette comprising a rear end regulation member 210 configured to be moved in a direction in which the recording media are fed to regulate rear ends of the recording media. Figure 2 of Kang also shows a size detection device 220 configured to swing with movement of the rear end regulation member. Kang further teaches a size determination device (means for detecting a position of the means for swinging) 240 arranged within an area corresponding to a width of the cassette in the direction in which the recording media are fed and configured to determine a size of the recording media stacked in the cassette by detecting a position of the size detection device.

With respect to claims 2 and 16, insofar as a backside surface is defined, Kang teaches the size detection device 220 provided to a backside surface of the cassette. (See Figure 2.)

With respect to claims, 15, 16, and 31 as outlined in column 1 line 11-14 of Kang teach an image forming apparatus for forming an image on a photoconductor.

With respect to the method steps recited in claim 33, these steps are deemed to be inherent in view of the functions of the apparatus discussed above, because when the apparatus is operated in its intended manner, the recited steps are necessarily performed.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 6,374,066) in view of Kang (US 6,254,085). As shown in Figures 1-3, Smith et al. teaches an image forming apparatus 10 with an image forming device configured to form an image on a photoconductor. Smith et al. also teaches a plurality of openings, shown generally at 5, for receiving a plurality of cassettes 5. Smith et al. teaches all the claimed structure, except the specific structure of the sheet feeding device is not known. Kang teaches a sheet-feeding device for an image forming device, similar to that of Smith et al. As shown in Figure 2, Kang teaches a cassette (stacking means) 200 in which recording media are configured to be stacked, the cassette comprising a rear end regulation member 210 configured to be moved in a direction in which the recording media are fed to regulate rear ends of the recording media. Figure 2 of Kang also shows a size detection device 220 configured to swing with movement of the rear end

regulation member. Kang further teaches a size determination device (means for detecting a position of the means for swinging) 240 arranged within an area corresponding to a width of the cassette in the direction in which the recording media are fed and configured to determine a size of the recording media stacked in the cassette by detecting a position of the size detection device. To one of ordinary skill in the art, it would have been obvious to employ, in the apparatus of Smith et al., the sheet feeding device of Kang, because the device of Kang provides the benefit of providing page sizes without pulling the tray from the main frame of the printing device, as outlined in column 1 lines 39-44.

*Allowable Subject Matter*

5. Claims 3-14, and 17-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, including the size detection device configured to extend such that a swinging side end thereof is located at the other end of the cassette in the direction in which the recording media are fed, and wherein the size determination device is arranged at a side of the other end of the cassette in the direction in which the recording media are fed.

Claim 4 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the size detection device has a swing radius corresponding to the length of the moving path of the rear end regulation

member of the tray expansion/contraction part extended by attaching the auxiliary member to the part of the tray expansion/contraction part forming the moving path of the rear end regulation member.

Claim 5 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the size detection device has a swing radius directed toward and extended to an end of the cassette opposite an end of the cassette in the direction in which the recording media are fed.

Claim 6 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein a tilt prevention member is provided between a wall part of the cassette and the cam part and configured to contact the cam part so that the cam part can be prevented from being tilted when the cam part pushes the size determination device.

Claim 17 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, including the size detection device configured to extend such that a swinging side end thereof is located at the other end of the cassette in the direction in which the recording media are fed, and wherein the size determination device is arranged at a side of the other end of the cassette in the direction in which the recording media are fed.

Claim 18 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the size detection device has a swing radius corresponding to the length of the moving path of the rear end regulation member of the tray expansion/contraction part extended by attaching the auxiliary member to the

part of the tray expansion/contraction part forming the moving path of the rear end regulation member.

Claim 19 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein the size detection device has a swing radius directed toward and extended to an end of the cassette opposite an end of the cassette in the direction in which the recording media are fed.

Claim 20 is indicated as having allowable subject matter because the prior art of record does not teach or render obvious the total combination claimed, wherein a tilt prevention member is provided between a wall part of the cassette and the cam part and configured to contact the cam part so that the cam part can be prevented from being tilted when the cam part pushes the size determination device.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave A. Ghatt whose telephone number is (571) 272-2165. The examiner can normally be reached on Mondays through Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2854

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAG



**REN YAN  
PRIMARY EXAMINER**